

In the Claims:

This listing of claims replaces all prior versions and listings of claims:

1. (Currently amended) An exposure method comprising the steps of:

~~measuring an~~ determining a measured image placement of ~~by scanning a mask disposed~~
~~at an inversion a posture against~~ with respect to gravity, said posture being inverted relative to an
~~exposure posture, and measuring a resulting image placement;~~

~~correcting said measured image placement with considering a pattern displacement~~
~~caused by gravity at the exposure posture to prepare a~~ preparing first correction data, said first
correction data being based on a difference between ~~a corrected~~ the measured image placement
and ~~[[a]]design data~~ and consideration of a pattern displacement caused by gravity at the
exposure posture; and

~~performing an exposure by deflecting, using said first correction data, a charged particle~~
~~beam based on said first correction data to correct a position of a~~ resulting exposure pattern to be
~~exposed to a subject.~~

2. (Currently amended) An exposure method as set forth in claim 1, wherein a transfer function indicating an interrelation of the pattern displacement caused by gravity at the exposure posture and the ~~inversion postures~~ measured image placement is prepared by using a test mask in advance, and ~~said measured image placement~~ the position of the resulting exposure pattern is corrected by using said transfer function.

3. (Currently amended) An exposure method as set forth in claim 1, wherein said mask is provided with a pattern for measuring a placement precision ~~which differs~~, said pattern differing from said the resulting exposure pattern to be projected to said subject, and the step of ~~measuring the determining a measured~~ image placement of ~~said mask~~ comprises measuring a ~~position of said pattern for measuring the resulting image placement to determine~~ the placement precision of said mask.

4. (Currently amended) An exposure method ~~as set forth in claim 1, before the step of performing the exposure further~~ comprising the steps of:

determining a measured image placement by scanning a mask disposed at a posture with respect to gravity, said posture being inverted relative to an exposure posture, and measuring a resulting image placement;

preparing first correction data, said first correction data being based on a difference between the measured image placement and design data and consideration of a pattern displacement caused by gravity at the exposure posture;

measuring a curved shape of said mask at the exposure posture; ~~and~~

preparing ~~[[a]]~~ second correction data indicating a displacement of the image placement caused by ~~a curved shape of the respective masks at the exposure posture based on~~ said measured curved shape, shape; and

~~wherein the step of performing~~ [[the]] an exposure includes performing the exposure by

deflecting, based on said first correction data and said second correction data, a charged particle beam ~~based on said first correction data and said second correction data~~ to correct ~~[[the]]~~ a position of ~~[[the]]~~ a resulting exposure pattern ~~to be exposed to said subject~~.

5. (Currently amended) An exposure method as set forth in claim 4, wherein the step of preparing said second correction data comprises ~~preparing said second correction data~~ indicating ~~[[the]]~~ a displacement of ~~said~~ the resulting image placement based on a difference of the measured curved shape of a test mask at the exposure posture measured in advance and ~~[[the]]~~ a curved shape of ~~said measured~~ a production mask.

6. (Currently amended) An exposure method as set forth in claim 4, wherein the step of preparing said second correction data ~~comprises~~ comprises:

preparing a plurality of ~~said~~ second correction data, wherein each of said plurality of second correction data ~~indicating the~~ indicates a displacement of ~~said~~ a resulting image placement based on a difference of a measured curve shape of each of a plurality of test masks at the exposure posture ~~by using a~~ each of said plurality of ~~[[the]]~~ test masks having a different curved shape ~~each other and~~ shape;

storing ~~[[a]]~~ said plurality of ~~said~~ second correction data ~~[[to]]~~ in a database, and

reading out said plurality of second correction data from said database and utilizing ~~said~~ a selected second correction data ~~which is~~ corresponding to ~~said~~ a test mask having closest curved shape in comparison with said curved shape of ~~said measured~~ a production mask.

7. (Original) An exposure method as set forth in claim 1, wherein a stencil mask is used as said mask.

8. (Original) An exposure method as set forth in claim 1, wherein electron beam is used as said charged particle beam.

9. (Currently amended) A semiconductor device manufacturing method having an exposure step of projecting a pattern to a semiconductor device by irradiating charged particle beam via a mask, said exposure step comprising the steps of:

~~measuring an~~ determining a measured image placement of ~~by scanning~~ said mask disposed at an inversion a posture against with respect to gravity, said posture being inverted relative to an exposure posture, and measuring a resulting image placement;

~~correcting said measured image placement with considering a pattern displacement caused by gravity at the exposure posture to prepare~~ preparing first correction data, said first correction data being based on a difference between a corrected the measured image placement and [[a]] design data and consideration of a pattern displacement caused by gravity at the exposure posture; and

performing an exposure by deflecting, using said first correction data, a charged particle beam based on said first correction data to correct a position of a resulting exposure pattern to be exposed to a subject.

10. (Currently amended) A semiconductor device manufacturing method as set forth in

claim 9, wherein a transfer function indicating ~~a relation~~ an interrelation of the pattern displacement caused by gravity at the exposure posture and the ~~inversion postures~~ measured image placement is prepared by using a test mask in advance, and ~~said measured image placement~~ the position of the resulting exposure pattern is corrected by using said transfer function.

11. (Currently amended) A semiconductor device manufacturing method as set forth in claim 9, wherein said mask is provided with a pattern for measuring a placement precision ~~which differs~~ , said pattern differing from said the resulting exposure pattern to be projected to said subject, and the step of ~~measuring the~~ determining a measured image placement of said mask comprises measuring ~~a position of said pattern for measuring~~ the resulting image placement to determine the placement precision of said mask.

12. (Currently amended) A semiconductor device manufacturing method as set forth in claim 9, ~~before the step of performing the exposure further~~ comprising the steps of:

determining a measured image placement by scanning a mask disposed at a posture with respect to gravity, said posture being inverted relative to an exposure posture, and measuring a resulting image placement;

preparing first correction data, said first correction data being based on a difference between the measured image placement and design data and consideration of a pattern displacement caused by gravity at the exposure posture;

measuring a curved shape of said mask at the exposure posture; ~~and~~

preparing ~~[[a]]~~ second correction data indicating a displacement of the image placement caused by a curved shape of the respective mask at the exposure posture based on said measured curved shape, shape; and

~~wherein the step of performing [[the]] an exposure includes performing the exposure by~~
~~deflecting , based on said first correction data and said second correction data, a charged particle~~
~~beam based on said first correction data and said second correction data to correct [[the]] a~~
~~position of [[the]] a resulting exposure pattern to be exposed to said subject.~~

13. (Currently amended) A semiconductor device manufacturing method as set forth in claim 12, wherein the step of preparing said second correction data comprises ~~preparing said~~
~~second correction data~~ indicating ~~[[the]]~~ a displacement of said the resulting image placement based on a difference of the measured curved shape of a test mask at the exposure posture measured in advance and ~~[[the]]~~ a curved shape of ~~said-measured~~ a production mask.

14. (Currently amended) A semiconductor device manufacturing method as set forth in claim 12, wherein the step of preparing said second correction data comprises:

preparing a plurality of ~~said~~ second correction data, wherein each of said plurality of
second correction data ~~indicating the~~ indicates a displacement of ~~said~~ a resulting image placement based on a difference of a measured curve shape of each of a plurality of test masks at
the exposure posture by using a each of said plurality of ~~[[the]]~~ test masks having a different

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curved ~~shape each other and~~ shape;

storing ~~[[a]]~~ said plurality of ~~said~~ second correction data ~~[[to]]~~ in a database, and

reading out said plurality of second correction data from said database and utilizing ~~said a~~ selected second correction data ~~which is~~ corresponding to ~~said a~~ test mask having closest curved shape in comparison with said curved shape of ~~said-measured~~ a production mask.

15-20. (Canceled)